

Index of Relevant Material Template

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Index Exh. No.	CA-351
Privileged Info (Yes/No)	Yes
Document Title	Rebuttal Testimony of Dr. Gary A. Stern on Behalf of the California Parties
Document Author	Dr. Gary A. Stern
Doc. Date (mm/dd/yyyy)	03/20/2003
Specific finding made or proposed	Sellers withheld from the market. Seller withholding and other market manipulation, not buyer underscheduling, led to forced reliance on the Real-Time Market. Market fundamentals do not explain the excessive prices charged by sellers in the ISO and PX markets during the period May 1, 2000 - June 20, 2001.
Time period at issue	a) before 10/2000; b) between 10/2000 and 6/2001
Docket No(s). and case(s) finding pertains to *	EL00-95 and EL00-98 (including all subdockets)
Indicate if Material is New or from the Existing Record (include references to record material)	New
Explanation of what the evidence purports to show	The sellers have presented nothing new on the issue of rescheduling. Far from experiencing buyer underscheduling, the PX markets, beginning in the summer of 2000, reflected deliberate “under offering” by sellers. The expert witnesses that sellers proffer have studiously avoided examining any aspect of their clients’ behaviors, apparently in recognition that looking at what actually happened would undermine the story they are attempting to tell. In addition, they fail to take account of the IOUs’ actual behavior and the reasons for that behavior. The attempts of some sellers to depict Fat Boy-type strategies as beneficial to the functioning of the ISO real-time market are incorrect, contradicted by testimony of ISO officials, and ignore the fact that Fat Boy was premised on the

	provision of false information to the ISO.
Party/Parties performing any alleged manipulation	All sellers

*This entry is not limited to the California and Northwest Docket Numbers.

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

San Diego Gas & Electric Company, Complainant,)	Docket Nos. EL00-95-000
)	EL00-95-045
)	EL00-95-075
v.)	
)	
Sellers of Energy and Ancillary Services)	
into Markets Operated by the California)	
Independent System Operator)	
Corporation and the)	
California Power Exchange,)	
Respondents.)	
)	
)	
Investigation of Practices of the)	EL00-98-000
California Independent System)	EL00-98-042
Operator and the California Power)	EL00-98-063
Exchange)	

REBUTTAL TESTIMONY OF
DR. GARY A. STERN
ON BEHALF OF THE CALIFORNIA PARTIES

1 I. Introduction and Overview

2 Q. What is the purpose of your Rebuttal Testimony?

3 A. I address the submissions of several sellers on March 3, 2003, in which the issue of buyer
4 underscheduling – specifically, underscheduling by the California investor-owned
5 utilities (IOUs) – is discussed.

6 Q. Please summarize your conclusions.

7 A. The sellers have presented nothing new. Their witnesses fail to recognize that
8 “underscheduling” in the Summer of 2000 was the result of sellers offering less power, at

1 higher prices, in the PX day-ahead market than they did in corresponding months of
2 1999. They have studiously avoided examining their clients' behaviors, and have
3 incorrectly analyzed the IOUs' behavior. The attempts of some witnesses to depict Fat
4 Boy-type strategies as beneficial to the functioning of the ISO real-time market are
5 incorrect, contradicted by testimony of ISO officials, and ignore the fact that Fat Boy was
6 premised on the provision of false information to the ISO.

7 **II. Summary of Sellers' Presentations on Underscheduling**

8 Q. Did the sellers attempt to justify their behavior by placing the blame for market
9 dysfunction on IOU underscheduling?

10 A. Yes. Several sellers either claimed that market dysfunction was caused by IOU buyers'
11 underscheduling (Tabors, Wilson, Cicchetti), that underscheduling was used to depress
12 prices (Tabors), or that it was used to increase prices (Wilson). Some sellers also argue
13 that seller behavior was used in response to buyer underscheduling (Hamal, Tabors,
14 Harvey/Hogan).

15 Q. Are these conclusions accurate?

16 A. No. The sellers' analyses of underscheduling are fundamentally flawed. In my earlier
17 testimony,¹ I demonstrated that underscheduling of load, defined as load ultimately being
18 served in the ISO's real-time market, was the direct result of sellers withdrawing supply
19 from the PX day-ahead market to the point where IOU buyers could not, at any price, bid
20 to meet their load in the PX, in almost all (201 of 208) of the hours when

¹ Prepared Testimony of Dr. Gary A. Stern on Behalf of the California Parties
(Stern Testimony), Exh. No. CA-3.

underscheduling caused reliability problems.² I showed that bid curves by suppliers fundamentally changed between 1999 and 2000, such that far fewer MW were available for buyers to purchase, at any price.³ Furthermore, I demonstrated that had IOU buyers bid vertically (*i.e.*, been willing to pay up to the PX maximum of \$2,500/MWh) – as Dr. Tabors suggests PG&E should have done on April 11, 2000 at hour 15⁴ – for the duration of the summer period, they would have incurred an additional \$6.7 billion in costs to serve their net load, with no change in system reliability.⁵

A. Testimony of Dr. Richard D. Tabors on Behalf of Powerex Corporation

Q. Can you explain the flaws in Dr. Tabors' analysis?

A. Yes. Dr. Tabors explains demand bidding behavior by first noting that “all load is bid in” to the PX day-ahead market.⁶ This admission suggests that in fact, there is no underscheduling of load by buyers, even according to Dr. Tabors. He then adds the following qualifier, “but a significant component of that load is bid at a price below which suppliers will supply.”⁷ It is noteworthy that Dr. Tabors does not describe the point at which suppliers will supply profitably, but merely the price at which they are

² *Id.* at 59-64.

³ *Id.* at 8-26.

⁴ See Testimony of Dr. Richard D. Tabors on Behalf of Powerex Corporation (Tabors Testimony), Exh. No. PWX-24 at 27-28.

⁵ Stern Testimony, Exh. No. CA-3 at 66-70.

⁶ Tabors Testimony, Exh. No. PWX-24 at 21.

⁷ *Id.*

1 willing to supply. Apparently Dr. Tabors believes that buyers should be prepared to pay
2 the price at which sellers are willing to supply, no matter how high it is. As the
3 California Parties' testimonies have demonstrated, there was substantial economic
4 withholding during 2000 and 2001. The prices at which "suppliers will supply" were not
5 just and reasonable.

6 Furthermore, if the market is competitive, an assumption Dr. Tabors makes in his
7 testimony,⁸ then sellers should not expect to succeed when bidding above their marginal
8 operating costs. For buyers to bid under the assumption that they could buy at the prices
9 at which suppliers were willing to supply, combined with Dr. Tabors' own assumption
10 about the market working competitively, suggests that buyers should have bid to buy at
11 prices approximating the expected marginal operating cost. As described in the
12 submissions referenced in my prior testimony, both SCE and PG&E bid so as to buy less
13 than their full forecasted demand precisely when the price at which suppliers were
14 willing to supply exceeded prices consistent with the market working competitively.⁹

15 Dr. Tabors also addresses a particular buyer and hour in detail, examining
16 PG&E's behavior for Hour Ending 15 on April 11, 2000. It is not clear why Dr. Tabors
17 chose this particular hour to analyze – it is not representative of the many higher priced
18 hours later in the Summer of 2000 in which the California Parties have alleged significant

⁸ *See id.* at 24.

⁹ Stern Testimony, Exh. No. CA-3 at 42-44; *see also*, Response of Southern California Edison Company to Requests for Admission, Production of Documents, and Other Requests for Information; Affidavit, FERC Dkt. No. PA02-2-000 (May 22, 2002), Exh. No. CA-293 at 9-10; PG&E Annual Transition Cost Proceeding Testimony, Chapter 1 at 17-20, Exh. No. CA-240 at 20-23.

1 market manipulation by sellers. Dr. Tabors may have chosen the hour for that very
2 reason, or perhaps because this was an hour, unlike many hours in the months to follow,
3 in which Powerex was not using the Fat Boy strategy, and thus he thought that more
4 careful analysis of this hour would be less likely to yield embarrassments about Powerex.

5 Dr. Tabors' analysis of this hour has serious mathematical and data flaws. For
6 example, Dr. Tabors does an analysis of PG&E's cost to buy in the PX market, and
7 compares that cost to the cost to buy in the ISO imbalance energy market. But his cost
8 analysis neglects to consider the fact that PG&E sells power as well as buying power.
9 PG&E's net costs reflect the difference between the cost of the power it sells and buys.
10 Because he neglects this fact, all of his mathematical results about PG&E's costs relate
11 only to gross purchase costs and do not accurately reflect PG&E's economic impacts in
12 the market.

13 Dr. Tabors also relies entirely for his analysis on the Unconstrained Market
14 Clearing Price (UMCP) – a preliminary price result in the PX auction, but not the price
15 that buyers actually pay and sellers actually receive after the ISO runs its congestion
16 models. For some purposes, a comparison of UMCP can be useful. But in looking
17 closely at a particular buyer's costs in a particular hour, ignoring the actual prices that the
18 buyer paid after congestion again yields inaccurate results. Likewise, Dr. Tabors focused
19 only on quantities in the unconstrained market in order to calculate the percentage that
20 was "underscheduled" by PG&E. But he neglects to take into account that the final
21 quantities awarded to PG&E, after congestion, which were higher by 275 MW than the
22 numbers stated by Dr. Tabors to be PG&E's final quantities in the PX market. And in

1 examining the cost drivers for PG&E, Dr. Tabors neglected to include the costs of
2 replacement reserves – which were purchased by the ISO and charged to load that could
3 not be served in the PX market.

4 It turns out that the price and quantity of replacement reserves procured by the
5 ISO on Hour Ending 15 on April 11, 2000, were insignificant. Such was not the case by
6 June of 2000. Dr. Tabors' failure to get the costs and quantities right, even for the one
7 seller and one hour that he made the central focus of his testimony, is reflective of his
8 overall approach, which depends on coarse generalizations that ignore the real facts,
9 including the real behavior of his own client in influencing these markets.

10 Dr. Tabors' apparent point, after all his flawed analysis and quantifications, is that
11 the IOUs had the incentive not to submit vertical demand bids into the PX market. On
12 that basic conclusion, I agree with Dr. Tabors. As I demonstrated in my prior testimony,
13 during the May through September 2000 period, vertical demand bidding would have
14 cost the IOUs over \$6.7 billion in additional costs on their net purchases.¹⁰ This is really
15 an understatement – as sellers would likely have responded to a pattern of vertical
16 demand bidding by increasing their supply bids, which would have driven PX prices even
17 higher. While I agree with the general proposition that the buyers would have been
18 irrational to submit vertical demand curves, I do not agree that analysis of this hour on
19 April 11, 2000 sheds any light on the issue. This examination by Dr. Tabors is flawed
20 analytically, and not representative of typical hours during the energy crisis. As such, it
21 forms a poor basis from which to draw conclusions about buyers' behavior.

¹⁰ Stern Testimony, Exh. No. CA-3 at 69.

1 Dr. Tabors based this analysis on another faulty assumption. He asks us to
2 consider “that the supply curve represents the outcome of a competitive process – one in
3 which the individual players competitively bid their supply portfolio.”¹¹ The California
4 Parties have provided overwhelming evidence that this assumption does not represent the
5 facts as they occurred during the May 1, 2000 through June 20, 2001 period.

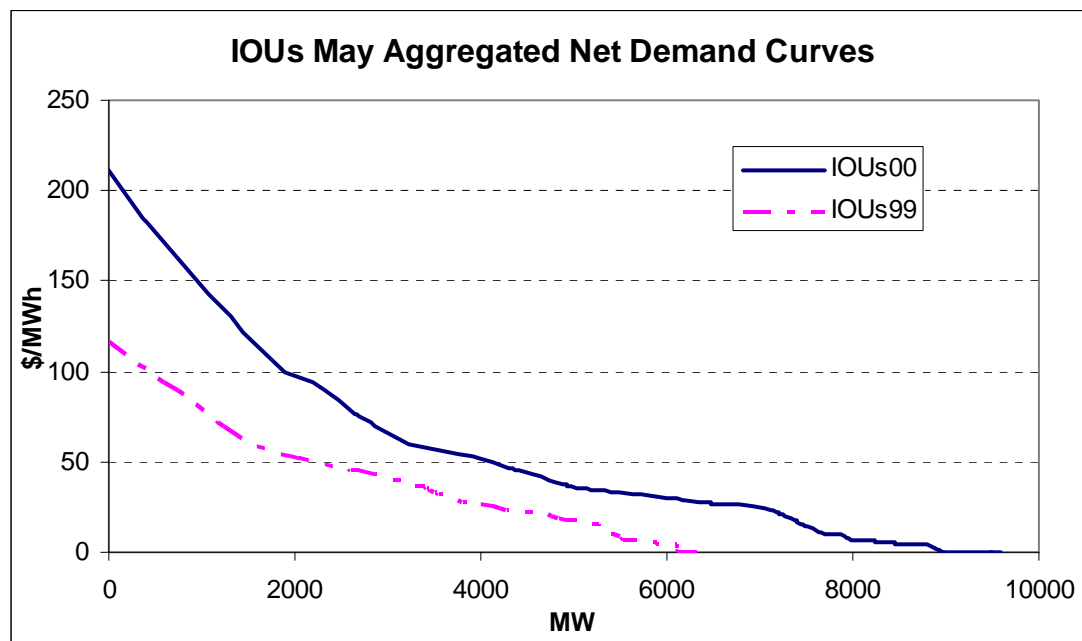
6 Dr. Tabors also makes a fundamental error in his description of the environment
7 in which the underscheduling took place. He states, “[W]ell before the prices ran up in
8 the summer of 2000, the strategy resulted in Real Time prices were (sic) significantly and
9 quite consistently higher than Day Ahead prices.”¹² Although an interesting predicate for
10 the buyers’ strategy as he describes it, the facts are different. During the first 24 months
11 of operation in the PX and ISO, through March of 2000, the average prices in NP15 for
12 the ISO real-time and PX day-ahead markets were \$29.43 and \$28.78 respectively. The
13 ISO prices were higher than the PX prices in only 13 of the 24 months. This does not
14 reach the levels of “significantly” and “quite consistently,” as Dr. Tabors asserts.

15 The SP15 situation is even more revealing. The ISO real-time and PX day-ahead
16 market prices were, respectively, \$26.39 and \$26.62; contrary to Dr. Tabors’ assertion,
17 the average PX price was higher than the average ISO price during that period. PX prices
18 exceeded ISO prices in 12 of the 24 months. Dr. Tabors’ assessment of the necessity for
19 sellers to sell in the ISO’s real-time market rather than the day-ahead market, due to the
20 significant and consistent price disparity, is not supported by the facts.

¹¹ *Id.* at 24.

¹² *Id.* at 29.

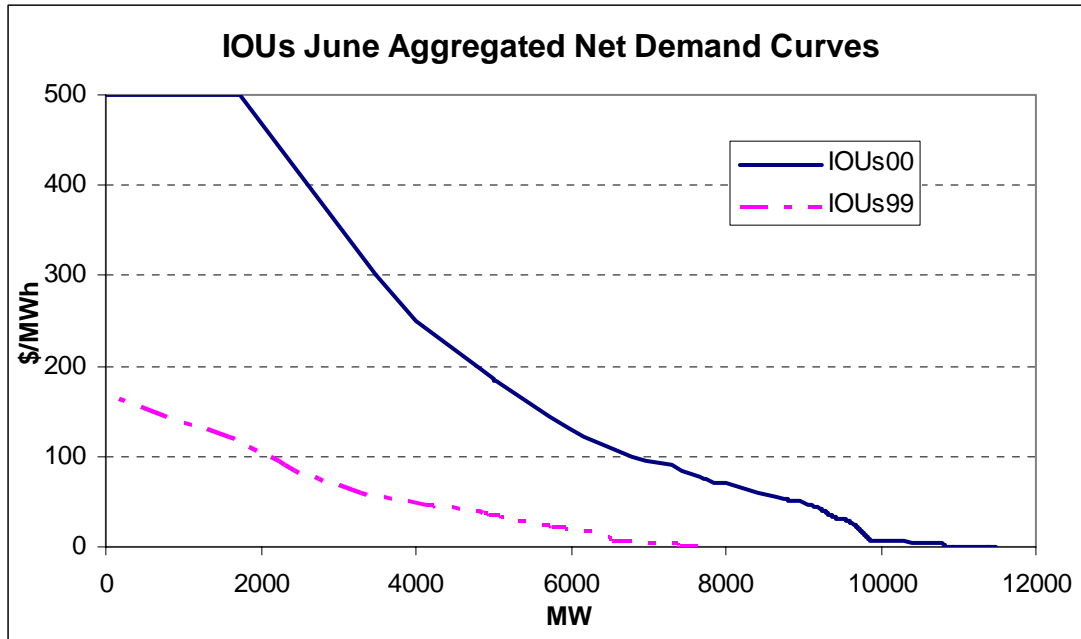
Dr. Tabors characterizes the increase in purchasing from the ISO real-time market as a movement by IOUs from the PX to the ISO real-time market.¹³ In fact, as I demonstrated in my prior testimony, it was the sellers that withdrew thousands of MW of power offers from the PX day-ahead market between 1999 and 2000, making it impossible for the buyers to acquire sufficient power to meet their needs on a day-ahead basis and forcing their purchases into the real-time market.¹⁴ Dr. Tabors suggests that it was buyers' behavior that changed in 2000. The graphs below show the aggregate net buy bids of the three IOUs for the months of May through September 2000 for hour ending 16, on weekdays (the same set of bids considered for the supply analysis contained in my prior testimony).



¹³ *Id.* at 21.

¹⁴ See Stern Testimony, Exh. No. CA-3 at 8-26.

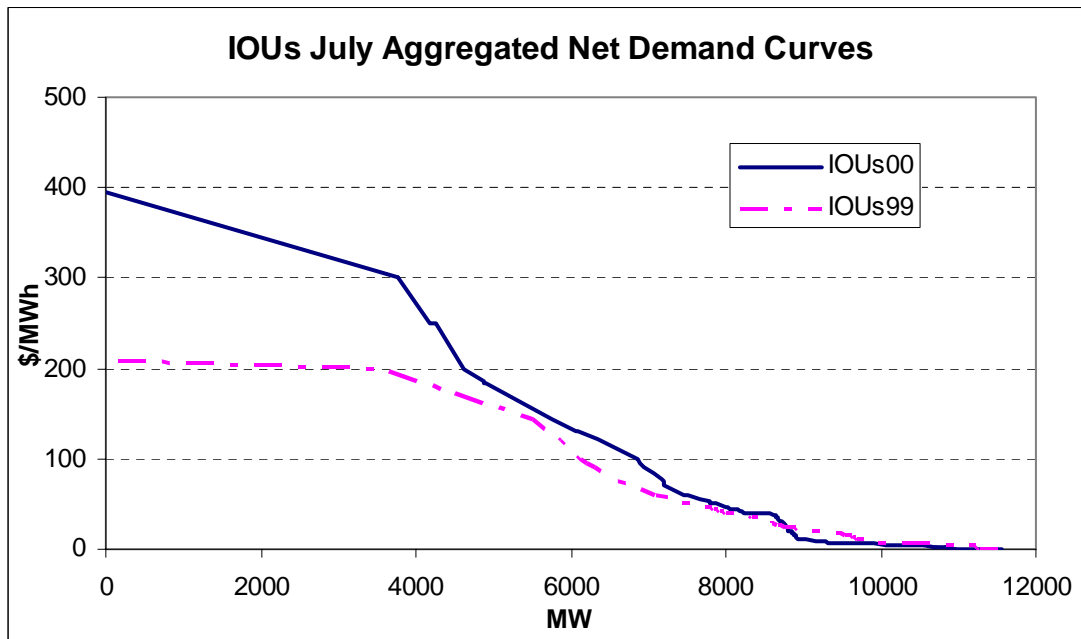
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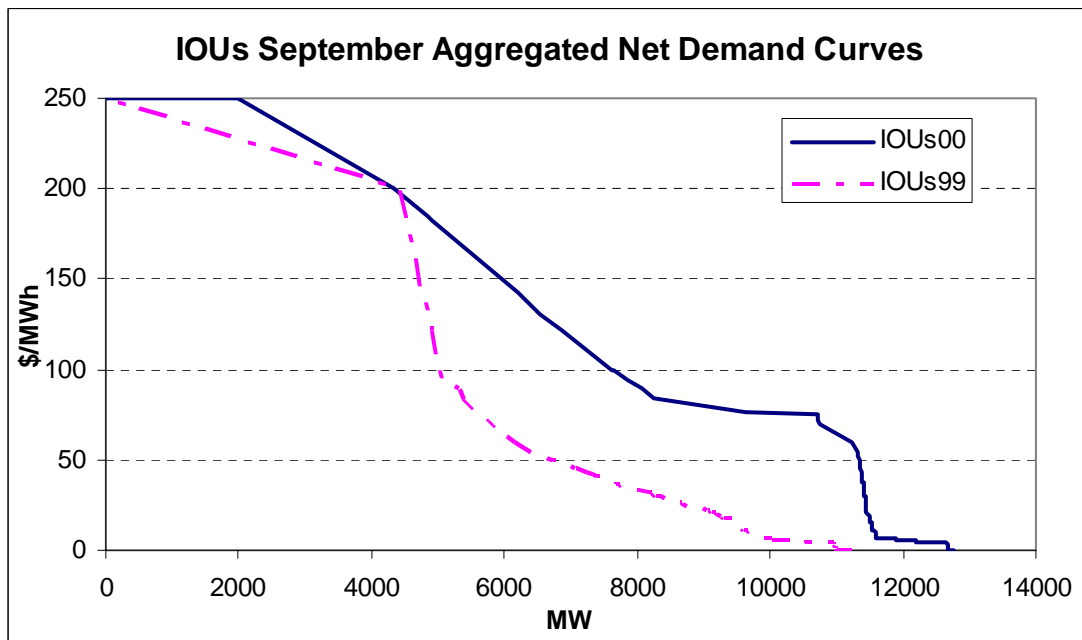
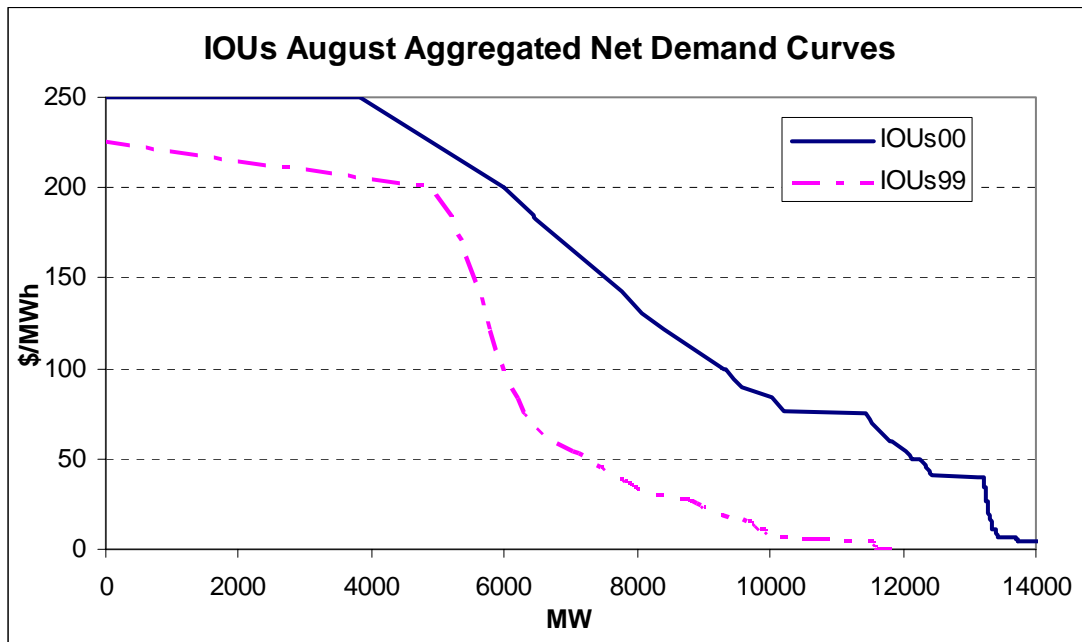
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As these graphs clearly show, the IOU buyers bid to buy substantially more power in the PX day-ahead market in 2000 than in 1999, and were willing to pay substantially

1 higher prices for that power. For example, looking at August, in my prior testimony I
2 showed that sellers offered 8,000 MW less power, on average, than in 1999.¹⁵ During
3 that same month, the three IOU buyers attempted to buy from 1,000 to 5,000 MW more
4 power than they had in 1999 at the same prices. Alternatively, buyers' bids demonstrated
5 a willingness to purchase in the PX day-ahead market, at a price in excess of \$150/MWh,
6 the same volume they were willing to pay \$50/MWh in the PX day-ahead market in
7 1999.

8 In summary, the changes that took place in the PX day-ahead market were as
9 follows. The demand curves, as shown above, shifted to the right between 1999 and
10 2000. The supply curves, as shown in my prior testimony, shifted to the left between
11 1999 and 2000.¹⁶ The market clearing prices and quantities in the PX day-ahead market
12 shifted upward and to the left, *i.e.*, there was less power transacted day-ahead, and the
13 transactions took place at higher prices. I used to play organized basketball regularly,
14 and one of the easiest calls the referees had to make is the call the Commission should
15 make here. If two players are reaching for the ball, and player one tries to hit the ball to
16 the right, and player two tries to hit the ball to the left, and the ball goes to the left, then

¹⁵ See *id.* at 25.

¹⁶ See *id.* at 8-26. It is no response for generators to argue that they offered less supply in the PX because they had sold forward contracts to marketers. Whether supply was being withheld from the PX by generators or by marketers is not the focus of my analysis of overall PX supply conditions. My testimony clearly demonstrates that the total supply offered in the PX in Summer 2000 was thousands of MW less than was offered in the summer of 1999.

1 player two hit it. Buyers tried to buy more, sellers tried to sell less, and less was
2 purchased. Underscheduling was caused by sellers.

3 The movement of power from the PX day-ahead market into the ISO real-time
4 market can only be attributed to sellers who offered less, and at higher prices, and not to
5 IOU buyers who tried to buy more, and were willing to pay higher prices. These are the
6 facts. The underscheduling debate is over. There was an under-offering by sellers, not
7 an underscheduling by buyers. Period.

8 Q. Does Dr. Tabors draw inaccurate inferences regarding seller behavior based on his
9 flawed analysis of buyer behavior?

10 A. Yes. Because he assumes that buyers are underscheduling – an assumption which I have
11 shown to be false – he asserts that it would be beneficial to the ISO if sellers were to
12 overschedule generation against load.¹⁷ This market manipulation, also known as Fat
13 Boy, involves creating a false load to schedule against a generation source as a means of
14 dumping energy into the ISO real-time market without submitting a bid. Dr. Tabors
15 actually argues that this action, which begins with the supplier withholding power from
16 the day-ahead market so that it has power remaining to overschedule, then continues
17 through the submission of a false load schedule to balance the power such that the ISO is
18 unaware that there will be generation available, is beneficial to the market. He states,
19 “Overscheduling to load is a planned event that assists in reliability of the system.”¹⁸ A

¹⁷ See Exh. No. PWX-24 at 35-38.

¹⁸ *Id.* at 35.

1 clear flaw in this theory is that overscheduling to load is only a “planned event” from the
2 seller’s perspective. Because the ISO does not know that the load schedule is false, it
3 must assume that the balanced schedule submitted by the scheduling coordinator is just
4 that, balanced. Bidding the power into the grid, while still a strategy that suffers from the
5 infirmity that the power was withheld day-ahead, would at least provide information to
6 the ISO grid operators that power was available to meet anticipated demand. Unlike
7 overscheduled load, the underscheduled load forced into the ISO market was known to
8 the ISO in advance, as IOUs provided forecasts of actual daily demands to the grid
9 operators.

10 Furthermore, assertions that somehow energy that was withheld from the day-
11 ahead market as part of a Fat Boy scheme improved ISO reliability do not withstand
12 scrutiny. Fat Boy load scheduled in the day-ahead market was fictional and therefore
13 could be “unscheduled” in the hour-ahead market at the whim of the party who originally
14 submitted the false information. For example, Powerex clearly contemplated using Fat
15 Boy in the day-ahead market to schedule power into the ISO grid, and then export that
16 same power in the hour-ahead market to collect congestion revenues.¹⁹ The ISO had no
17 basis to assume power scheduled to fictional demand would physically materialize in the
18 real-time market. Terry Winter, the CEO of the ISO, expressed these views, noting:

19 When people over-schedule, I then am put in the
20 position of trying to identify do they know something I did
21 not know about the load?

¹⁹ See e-mail from Thomas Bechard to Murray Margolis and others, with attached memorandum explaining Powerex deal with PGES, Exh. No. CA-46 at 2.

1 In other words, I can say it's 40,000, but let's say I
2 had a qualifying facility that was generating 400 megawatts
3 of load, and they're supposed to but they don't always tell
4 us when they're going to take their units off, so now all of a
5 sudden I've got a generator – or I've got a scheduling
6 coordinator who I'm thinking should only buy 200
7 megawatts, but because, in fact, he's going to have this
8 generator off he's going to buy 600, since he has 400
9 megawatts and generator and load that is there because the
10 unit is off, so he submits 600 generation to meet that load.

11 Then what you're asking me to do on over-
12 scheduling is look at every possible combination of the
13 people over-scheduling and say is this good or bad, and my
14 answer to that is it's bad, tell me to the best of your
15 knowledge what it is. Then I can schedule congestion, I
16 can schedule units, I'm dealing with real numbers rather
17 than inflated numbers.¹⁸

18 Likewise, the ISO's Vice President of Grid Operations, Jim Detmers, who served
19 as Managing Director of Operations in 2000, made it clear that while underscheduled
20 load would not have been a problem if sufficient resources had been bid into the ISO's
21 real-time market (the BEEP stack), overscheduled load caused reliability risks since it
22 created uncertainty in the level of generation to be provided in real time. In the following
23 response, Mr. Detmers explains the conditions under which underscheduling is not a
24 problem:

25 I believe what you are asking me is if there was sufficient
26 resources in the BEEP or the imbalance energy market,
27 would we have experienced the same reliability risks or
28 impacts that we saw during the time period. If we had
29 confidence and the BEEP stack did have sufficient
30 resources, both from internal generation as well as external
31 supplies on the ties that was sufficient to meet the

¹⁸ Deposition of Terry A. Winter at 62-63, Exh. No. CA-362 at 3 (Feb. 23, 2003).

underscheduling amount or the total Delta amount, we
would not have seen a problem.²⁰

And Mr. Detmers stated the following with regards to the overscheduling
practices that Dr. Tabors claim are “beneficial”:

Q. So if additional supply were just to show up in real-
time, you could be all of a sudden in a dramatic
overgeneration situation?

A. We could have very unpredictable conditions on the
system, which would put the system at risk, immediate risk.
That could include overfrequency, which could be just as
damaging as underfrequency.

Q. So that creates reliability problems that would be of
concern to the ISO?

A. Yes, that takes us one step closer to having major
problems on our hands. It would be uncontrolled instead of
controlled through the ISO’s operation.²¹

These two passages from Mr. Detmers, when considered together, and in the
context of the strategies of Powerex and others, make it abundantly clear that sellers’
behavior, in addition to manipulating the prices in the market, created reliability problems
for the ISO. The sequence consisted of the following. First, as noted above, IOU buyers,
in the aggregate, bid to buy increased power in the PX day-ahead prices, and were willing
to pay substantially more for this power in 2000, than in 1999. Sellers bid, in aggregate,
much less power into the PX day-ahead market in 2000 compared to 1999, and some,
such as Powerex, frequently purchased power out of the PX, exacerbating the IOU

²⁰ Deposition of Jim Detmers at 137, Exh. No. CA-363 at 3 (Feb. 4, 2003).

²¹ *Id.* at 140, Exh. No. CA-363 at 6.

1 buyers' shortfall. The result of this seller withholding and withdrawal strategy from the
2 PX was that IOU buyers had load that needed to be served in the ISO real-time market.
3 This, in and of itself, would not have been a problem to the ISO if sellers had bid their
4 available supply into the ISO's real-time market, as Mr. Detmers testified. But sellers
5 frequently did not bid their available power in to the ISO real-time market. They either
6 withheld these bids in order to attract OOM calls from the ISO, or, as was typical for
7 Powerex, they engaged in Fat Boy overscheduling, so that the power would bypass the
8 PX and ISO auctions and instead obtain the ISO's real-time market price without taking
9 the risk that additional supply in the auctions might lower the price. This was
10 accomplished through the provision of false information to the ISO in the form of fake
11 demand. As noted in both Mr. Winter's and Mr. Detmers' testimonies, the ISO would
12 not know what power would be coming, resulting in the potential for too much or too
13 little generation, and causing serious reliability concerns. The source of these reliability
14 concerns was clear. The facts are clear. The combination of withholding and false
15 scheduling practices drove up day-ahead and real-time prices, and caused serious
16 reliability concerns.

17 **B. Prepared Direct Testimony of Cliff W. Hamal**

18 Q. Does Mr. Hamal make the same mistakes as Dr. Tabors?

19 A. Yes. Mr. Hamal testifies for Reliant that underscheduling by demand was an acceptable
20 buying strategy, just as the defensive strategies employed by sellers. His testimony
21 includes the following exchange:

22 Q: Was it reasonable for sellers to target the real-time
23 market for some of their sales?

1 A: Yes, particularly in light of the chronic
2 underpurchasing of energy by buyers.²²

3 Mr. Hamal has drawn a conclusion based on the assumption, which I have clearly
4 proven to be false, that buyers were underpurchasing in the PX day-ahead market. In
5 fact, buyers were trying to purchase more, but sellers were offering less. Mr. Hamal does
6 not believe that underscheduling was market manipulation, as Dr. Tabors has proposed,
7 but he does believe that “It is an important benchmark of comparison, however, for
8 claims that might be made about sellers’ behavior.”²³ Through Mr. Hamal’s testimony,
9 we can once again see Reliant attempting to blame the buyers for the effects of
10 manipulative actions by the sellers.²⁴

11 Mr. Hamal provides an interesting insight into how behavior should be considered
12 in the electricity markets. He states:

13 It seems completely inappropriate to conclude today that
14 certain practices were in violation of market rules if
15 monitors at the time were aware of those practices and their
16 consequences, but did not challenge them.²⁵

17 While this passage could apply to buyer behavior, as is evidenced by the MMC and MSC
18 reports on underscheduling discussed in my prior testimony,²⁶ the same cannot be said of

²² Prepared Direct Testimony of Cliff W. Hamal (Hamal Testimony), Exh. No. REL-1 at 22.

²³ *Id.* at 23.

²⁴ See Stern Testimony, Exh. No. CA-3 at 6-8 (discussing Congressional testimony of Reliant’s John Stout).

²⁵ Hamal Testimony, Exh. No. REL-1 at 5.

²⁶ See Stern Testimony, Exh. No. CA-3 at 34-35, 40-41, 44-45.

1 seller behavior. The MMC and MSC reports have identified concerns over the exercise
2 of market power and the economic and physical withholding of power since their
3 November 10, 1998 analysis.²⁷ The Department of Market Analysis (DMA) analyses as
4 well as the MSC reports and quantification of market power have made it abundantly
5 clear, even before the Summer of 2000, that such behavior was not appropriate.²⁸ Mr.
6 Hamal's client neither passes this screen, nor seems concerned about market rules, as is
7 evident from this exchange from transcripts of Reliant trader conversations:

8 PERSON 2: Hey guys, you know when we might follow
9 rules? When there's a penalty, that's when.

10 PERSON 1: That's right.²⁹

11 **C. Initial Testimony of John W. Wilson**

12 Q. Does Dr. Wilson make the same mistakes as Dr. Tabors?

13 A. Yes. Dr. Wilson first asserts that under ISO rules, load serving entities like SCE and
14 PG&E were required to submit balanced schedules in the day-ahead market.³⁰ It is

²⁷ See ISO/PX market monitors' joint memorandum to CEOs of ISO and PX at 1 (Nov. 10, 1998), Exh. No. CA-107 at 1; see also, *Second Report on Market Issues in the California Power Exchange Energy Markets* at 47 (March 9, 1999), Exh. No. CA-148 at 6.

²⁸ See, e.g., California ISO, *Annual Report on Market Issues and Performance* at 1-25 through 1-32 (June 1999), Exh. No. CA-286 at 308-15; Frank A. Wolak, Chairman MSC, *Report on Redesign of California Real-Time Energy and Ancillary Services Markets* at 63-66, 97-100 (Oct. 18, 1999), Exh. No. CA-286 at 543-46; 577-80; DMA, *Price Cap Policy for Summer 2000* at 4-5, Exh. No. CA-287 at 4-5; MSC, *The Competitiveness of the California Energy and Ancillary Services Markets*, Exh. No. CA-287 at 54-62; Anjali Sheffrin, Director, DMA, *Market Analysis Report* at 3, 9, Exh. No. CA-287 at 65, 71 (May 2000).

²⁹ Transcripts of Reliant trader conversations, Exh. No. CA-239 at 8.

1 scheduling coordinators that are required to submit balanced schedules to the ISO. The
2 PX was SCE's and PG&E's scheduling coordinator, and the PX did submit balanced
3 schedules to the ISO.

4 Dr. Wilson proceeds to make the same error as Dr. Tabors and assume that the
5 large real-time volumes in the ISO were the result of buyer behavior. He then admits that
6 there was supply side manipulation of the real-time market, but asserts that as buyers the
7 IOUs "contributed to the magnitude of their injury through their own attempted demand-
8 side manipulation of the day-ahead market."³¹ The data clearly shows that as buyers the
9 IOUs were victims, first of manipulation by sellers in the PX day-ahead market, and then,
10 as a consequence of being victims once, were victimized again by seller abuse of the
11 ISO's real-time market.

12 Dr. Wilson bases his attacks on buyer behavior in part on prior ISO management
13 statements, such as an August 25, 2000 memo from Terry Winter.³² This memo follows
14 by 15 days the DMA analysis that concluded that supply under-offering was the cause of
15 the large real-time market.³³ Dr. Wilson also assumes that since this Commission, in its

³⁰ Initial Testimony of John W. Wilson on Behalf of the City of Burbank, California, City of Glendale, California, Imperial Irrigation District, and Turlock Irrigation District (Wilson Testimony), Exh. No. BGT-2 at 12.

³¹ *Id.* at 13.

³² Exh. No. BGT-4.

³³ California ISO Department of Market Analysis, Report on California Energy Market Issues and Performance: May-June, 2000, Exh. No. CA-231 at 2; *see also* Stern Testimony, Exh. No. CA-3 at 27-28.

December 15, 2000 Order,³⁴ introduced a penalty to load for underscheduling, which it later retracted on rehearing,³⁵ that load must be at fault. Again, the data demonstrate that economic and physical withholding by supply, not underbidding by demand, caused the underscheduling problem that the ISO and this Commission were trying to resolve.

D. Testimony of Charles J. Cicchetti

Q. Does Dr. Cicchetti make the same error as Dr. Tabors?

A. Yes. Dr. Cicchetti also concludes that the IOUs underscheduled their load and that these actions contributed to high energy prices in the California markets.³⁶ In so doing he has, as did Dr. Tabors, incorrectly assumed that the underscheduled load was the result of demand behavior, when in fact, it was the result of supplier withholding. Dr. Cicchetti proceeds to assert that the underscheduled load caused problems in sequential markets, again attributing these problems to buyers rather than their appropriate source, sellers.

E. Prepared Direct Testimony of Scott M. Harvey and William W. Hogan

Q. Do Drs. Harvey and Hogan make some of the same errors as Dr. Tabors?

³⁴ *San Diego Gas & Elec. Co.*, 93 FERC ¶ 61,294 at 62,002-03 (2000).

³⁵ *San Diego Gas & Elec. Co.*, 97 FERC ¶ 61,275 at 62,227 (2001).

³⁶ Testimony of Charles J. Cicchetti (Cicchetti Testimony), Exh. No. MAR-1 at 60.

1 A. Yes. Drs. Harvey and Hogan also assume that buyer behavior results in large real-time
2 volumes, when they try to claim, as did Dr. Tabors, that Fat Boy was beneficial to the
3 ISO to counter the load underscheduling.³⁷ In fact, Drs. Harvey and Hogan state:

4 Setting aside the legal or policy issues regarding
5 misrepresentations to the CalISO, and without defending
6 Enron's actions, we have sought to identify the market
7 impacts of Enron's behavior.³⁸

8 I would not like to set aside the legal and policy implications of misrepresenting
9 information to the California ISO. As noted in Dr. Fox-Penner's testimony, Mirant is
10 among the participants who engaged in overscheduling generation, particularly with their
11 units under RMR contract.³⁹

12 As noted earlier, the argument that Fat Boy was beneficial to the ISO is erroneous
13 because (1) the underscheduling was caused by supplier withholding, and
14 (2) overscheduling or Fat Boy was not helpful to the ISO, as its genesis was withheld
15 power, and the provision of false load schedules to the ISO is not equivalent to scheduled
16 power since the ISO believes that there will be a load matching that power. Fat Boy is
17 not a reliability solution – it is a reliability problem, as the power is withheld from the PX

³⁷ Prepared Direct Testimony of Scott M. Harvey and William W. Hogan on Behalf of Mirant Americas Energy Marketing, L.P., Mirant California, LLC, Mirant Delta, LLC and Mirant Potrero, LLC (Harvey/Hogan Testimony), Exh. No. MIR-1 at 250.

³⁸ *Id.* at 249.

³⁹ See Prepared Testimony of Dr. Peter Fox-Penner on Behalf of the California Parties, Exh. No. CA-1 at 170-74.

1 auction, causing a false perception of scarcity in order to create a crisis atmosphere and
2 drive up prices.

3 Q. Has the Commission taken a position regarding the false provision of information to the
4 ISO?

5 A. Yes. In testimony last year before the Senate Committee on Energy and Natural
6 Resources, Chairman Wood stated that the strategies described in the Enron memos,
7 involving the provision of false information to the ISO, either were illegal or should be.⁴⁰
8 He also characterized those strategies as “market manipulation” which could not ever be
9 just and reasonable or in the public interest.⁴¹

10 Christian Yoder, former senior counsel for Enron during the 2000-2001 period
11 also testified at the same hearing. He responded to Senator Diane Feinstein as follows:

12 Senator Feinstein: Thank you. I am going to ask you now
13 for you opinion, particularly you, Mr. Yoder and Mr. Hall.
14 Now that you have left Enron and you are working for a
15 firm that you indicate to me does not indulge in any of
16 these practices, either in the present or the past, do you
17 think these practices should be legal?

18 Mr. Yoder: My view, Senator, is any practice that involves
19 false information should be illegal and have civil and
20 possibly criminal sanctions. If there is false information
21 that is being submitted to a public agency, that is wrong.⁴²

⁴⁰ *Hearing to Examine Manipulation in W. Markets During 2000-2001 as Revealed in Recent Documents Made Pub. In the Course of Investigation Underway at FERC: Hearing before the Senate Comm. On Energy & Natural Res., 107th Cong. 187 (May 15, 2002), Tr. at 49:6-14.*

⁴¹ *Id.* at 64:2-18.

⁴² *Id.* at 113:3-13

1 Mr. Yoder thus addresses the issue that Drs. Harvey and Hogan wish to avoid. The U. S.
2 Department of Justice clearly takes the submission of false information in order to inflate
3 prices seriously as well, as it has indicted several traders for such acts. Those indictments
4 have led to felony convictions of two of the Enron traders who led the Enron efforts to
5 supply false information to the ISO through Fat Boy and related strategies.

6 Q. Does this conclude your rebuttal testimony?

7 A. Yes.

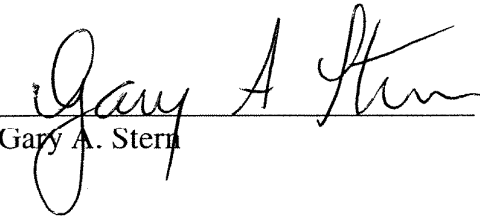
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

San Diego Gas & Electric Company,)	Docket No. EL00-95-069
Complainant,)	
)	
v.)	
)	
Sellers of Energy and Ancillary Services Into)	
Markets Operated by the California)	
Independent System Operator Corporation)	
and the California Power Exchange,)	
Respondents.)	
)	
Investigation of Practices of the California)	Docket No. EL00-98-058
Independent System Operator and the)	
California Power Exchange.)	

AFFIDAVIT OF GARY A. STERN

I declare under penalty of perjury that the foregoing is true and correct.

Executed on March 13, 2003.



Gary A. Stern